



## CATALYSED ACRYLIC COATING FOR PROTECTION OF STEEL

### 1 SCOPE

This specification applies to two-pack full gloss acrylic coatings for application to steel structures on which optimum surface preparation can be achieved.

### 2 BACKGROUND

- a) To obtain a broad overview of the Australian Paint Approval Scheme (APAS), refer to APAS document AP-D001.
- b) To obtain an overview of restricted ingredients in APAS certified products, refer to APAS document AP-D123.
- c) To obtain the current list of APAS participating manufacturers (and suppliers) and resellers, refer to APAS document AP-D152.
- d) To obtain an overview of how to participate in the APAS, refer to APAS document AP-D177.
- e) APAS approval to this specification may be gained by compliance with the requirements detailed in this specification and those in APAS document AP-D192.

### 3 DESCRIPTION AND GUIDE FOR USERS

#### 3.1 General Requirements

- a) This specification applies to two-pack full gloss acrylic coatings for application to steel structures on which optimum surface preparation can be achieved.
- b) The systems are intended to provide a service life in excess of 10 years under Class C3 Medium environmental conditions (AS 2312.1) or in situations where frequent maintenance is impractical. Refer to Table 6.3 in AS 2312.1 for details of systems and expected service lives.
- c) The manufacturer's technical / product data sheet should confirm that the exposure conditions to which the coating system is to be exposed is within the capabilities of that system.
- d) Where surface preparation is likely to be marginal and surface tolerant coatings are required, reference should be made to APAS specification AP-S0156.

#### 3.2 Sub-Classes

- a) This specification does not incorporate any sub-class.

#### 3.3 Basis of this Specification

- a) This specification is based on AS/NZS 3750.5 with the following modification:
  - i. Increase in exterior durability requirements from 48 to 72 months
- b) Paints approved under this specification conform to Paint Reference Number (PRN) C33 of AS 2312.1.

### 4 REFERENCED DOCUMENTS

- a) The following standards are referenced in this document:
  - i. **AS/NZS 1580** – Paints and related materials: Methods of test

- ii. **AS 2312.1** – Guide to the protection of structural steel against atmospheric corrosion by the use of protective coatings – Part 1: Paint Coatings
- iii. **AS/NZS 3750.5** – Paints for steel structures – Part 5: Acrylic full-gloss (two-pack)

These documents may be purchased through the Reference Standards Australia website:

<https://www.standards.org.au/>

- iv. **The Poisons Standard June 2021**: Standard for the Uniform Scheduling of Medicines and Poisons (SUSMP) No. 33, Part 2: Control on Medicines and Poisons, Section Seven / Appendix I Paint or Tinters

This document is available from the Australian Government Federal Register of Legislation website at: <https://www.legislation.gov.au/Details/F2021L00650>

- b) The following APAS documents are referenced in this document:
  - i. AP-D001 Rules Governing How APAS® Operates
  - ii. AP-D123 Restrictions on Ingredients in Product Formulations
  - iii. AP-D152 APAS® Participating Manufacturers and Resellers
  - iv. AP-D177 Rules Governing How Product Manufacturers participate in APAS®
  - v. AP-D181 Volatile Organic Compounds (VOC) Limits
  - vi. AP-D192 Rules Governing APAS® Product Certification Scheme
  - vii. AP-S0156 Epoxy Mastic High Build Two-Pack Coating for Rusted Steel

All APAS documents are available for download from the APAS website: <https://vs.csiro.au/apas/documents/>

All APAS specifications are available for download from the APAS website: <https://vs.csiro.au/apas/specifications/>

### 5 COMPOSITIONAL REQUIREMENTS

#### 5.1 Binder

- a) The binder shall typically be comprised of a hydroxy-, acid- or amine-terminated acrylic base, cured with an anhydride or epoxy copolymer hardener.

#### 5.2 Volatiles

- a) The volatile portion shall typically be comprised of hydrocarbons.
- b) For VOC content restrictions, refer to APAS document AP-D181.

#### 5.3 Pigmentation

- a) The pigmentation shall be chosen to impart the properties detailed in clause 7, Table 1 below.



## CATALYSED ACRYLIC COATING FOR PROTECTION OF STEEL

### 5.4 Colour

- a) Products approved under this specification are normally available in a wide range of colours.
- b) Where the decorative properties of these coatings are considered important, it is crucial that the appearance of the coating be maintained essentially throughout the life of the coating. Therefore, before other colours are used, purchasers should obtain the manufacturer's written assurance that the selected colour will have acceptable colour stability for the intended purpose.

## 6 PRODUCT APPROVAL REQUIREMENTS

### 6.1 General Requirements

- a) The product and its application for approval shall comply with the relevant requirements of APAS document AP-D192 during the life of the approval.

### 6.2 Technical Requirements

- a) The product shall comply with **all** the requirements of clause 7, Table 1 below.

### 6.3 Health and Safety Requirements

- a) The manufacturer's Safety Data Sheet (SDS) must be studied closely prior to using the product and complied with during use of the product.
- b) As products covered by this specification typically contain solvents, the paint is considered flammable and should be stored away from all sources of heat or ignition.
- c) Containers should be resealed immediately after use and good ventilation provided during use to minimise the risk of fire or explosion and the long-term toxic effects of absorption of the vapour into the lungs.
- d) Care should be taken to avoid contact with the skin using protective clothing and barrier cream. All pumping equipment should be adequately earthed. It is anticipated that most of these products would be applied by operators in well ventilated spray booths or in the field by operators with adequate safety equipment.
- e) Products intended for sale in Australia shall comply with all the requirements of the SUSMP. Products intended for sale in other countries shall comply with all local WHS and environmental requirements.
- f) The product shall comply with all requirements of clause 6.3 and 6.4 of APAS document AP-D192.



# SPECIFICATION AP-S2919



## CATALYSED ACRYLIC COATING FOR PROTECTION OF STEEL

7 TABLE 1: PERFORMANCE PROPERTIES

TEST	AS/NZS 1580 METHOD	REQUIREMENTS
<b>For EACH Component</b>		
Preliminary Examination	103.1	Shall be free of coarse particles, gel and foreign matter.
Reincorporation after Storage	211.2	After 12 months storage at ambient conditions, each component shall be able to be readily reincorporated. Settling shall not exceed a rating of 6. The mixture shall be free of coarse particles, gel and foreign matter.  When mixed in the manufacturer's recommended ratio, a smooth, homogeneous free-flowing mixture shall result with no signs of incompatibility. The mixture shall be able to be sprayed to produce a film typical of the product.
VOC Content	APAS AP-D181	Refer to APAS document AP-D181 for method and limits.  If the APAS specification is not listed on AP-D181, a declaration of VOC content <b>is still required</b> .
<b>Wet Mixed Paint Tests</b>		
General Requirements	<b>AS/NZS 3750.5</b>	Shall comply with <b>all</b> the requirements of <b>clause 2 Materials Requirements</b> (except as modified below).  <b>All</b> results shall be reported.
Volume Solids	Theoretical Calculation	Calculated value shall be reported. AS1580.301.2 not required.
Thinning or Mixing Properties	208.1	Using 10% of manufacturers recommended thinner, there shall be no signs of incompatibility.
Viscosity	214.x	State method and record results.
Aged Application	205.2 or 205.4	When the aged sample (refer to Reincorporation after Storage above) is applied by spray application, it shall produce a uniform finish typical of the product type.
<b>Dry Film Test</b>		
Resistance to Weathering	<b>AS/NZS 3750.5</b> 457.1	Applications for atmospheric exposure approval shall comply with the requirements of AS/NZS 3750.5 clause 2.5.9 after <b>72 months exposure</b> at all 3 atmospheric exterior atmospheric exposure sites (listed in APAS document AP-D192, clause 12).  <b>All</b> results shall be reported.



# SPECIFICATION AP-S2919



## CATALYSED ACRYLIC COATING FOR PROTECTION OF STEEL

### 8 APPENDIX A

#### Document History

Status: Current  
Version: 9  
Date Published: 14-09-2021

Document Version No.:	Date Published:	Summary of Changes:
9	14-09-2021	<ul style="list-style-type: none"><li>• General format changes</li><li>• Updated background information in clause 2</li><li>• Updated SUSMP information</li><li>• Updated APAS website information</li></ul>
8	18-12-2020	<ul style="list-style-type: none"><li>• Addition of Appendix A Document History and removal of the Editorial Note previously used in specification versions</li><li>• Updated document to the current format</li><li>• Updated internal and external document references</li><li>• Inclusion of VOC Content requirement to Table 1 Performance Properties</li><li>• Addition of "People + Product = Protection" to Footer</li></ul>
7	17-11-2003	<ul style="list-style-type: none"><li>• Removed reference to GPC and incorporated a general format update</li></ul>
6	23-05-2001	<ul style="list-style-type: none"><li>• Initiated the second stage of the move to new specification numbering with prominence given to the new number (previously GPC-C-29/19)</li></ul>